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Application Number: 09/394,096

Group Art Unit: 2614

Filed: September 13, 1999

Examiner Name: Sing

Applicant: Davis et al.

Attorney Docket Number: Davis 6-9-5

TITLE: MESSAGE PLAYBACK WITH CONCURRENT SPEAKERPHONE OPERATION

Total Number of Pages in this Submission: 20

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ALEXANDRIA, VA 22313-1450

SIR:

Transmitted herewith is:
Appeal Brief (filed in triplicate) – 19 pages.

The Commissioner is hereby authorized to charge any additional fees required under 37 C.F.R. 1.16 or any patent application processing fees under 37 C.F.R. 1.17 associated with this communication, or credit any over payment to Deposit Account No. 50-0687 under Order No. 73-636.

Respectfully submitted,

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IN RE PATENT APPLICATION OF:

DAVIS

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November 2, 2006

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Applicants submit herewith the following Appeal Brief in triplicate as required by 37 C.F.R. § 41.37(c).

(1) REAL PARTY IN INTEREST

The real party in interest is Agere Systems Inc.

(2) RELATED APPEALS AND INTERFERENCES

The Applicants and their legal representatives and assignee are not aware of any other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the appending appeal.

(3) STATUS OF THE CLAIMS

Claims 1-21 and 23-29 are pending in this application. Claims 1-21 and 23-29 stand rejected.

(4) STATUS OF AMENDMENTS

No amendments were filed after the Final Rejection dated April 5, 2006.

(5) SUMMARY OF THE CLAIMED SUBJECT MATTER

Voice messaging systems such as telephone answering devices are well known. A typical telephone answering device allows a caller to record a voice message for a user who fails to answer an incoming telephone call. However, oftentimes it is desired to share a particular voice message with someone else. To do so, the conventional user must call and verbally paraphrase or repeat the voice message which they played back for themselves. It is possible to playback a voice message and hold the handset of a telephone toward the speaker of the telephone answering device, allowing an uncontrolled level of the played back voice message to be coupled into the telephone call between the user and the other person at the far end of a telephone call. Unfortunately, this typically requires the user to take the handset away from their own ear, preventing the user from participating in a conversation with the far end party while picking up some level of the played back message.

Applicants' invention allows a user of a telephone answering device, in particular a telephone answering device that has speakerphone functionality, to share a recorded voice message with another party. The recorded voice message is inserted within the speakerphone at a specific point within the circuit to allow proper volume levels to be heard by the parties involved in a telephone call.

Applicants disclose a receive path, as recited by claim 1, of a voice messaging system with speakerphone capability comprising a receive signal from a telephone line, a hybrid echo canceller, e.g., Fig. 1, item 112, an

automatic gain control module, e.g., Fig. 1, item 130, and a message playback module to playback a message playback signal relating to a user pre-recorded voice message, e.g., Fig. 1, item 140. Applicants voice messaging system further comprises a combiner to combine the message playback signal with the receive signal into the receive path before the automatic gain control and after an output of the hybrid echo canceller allowing the message playback signal to be heard by the near-end party at a comparable level as the receive signal during speakerphone operation, e.g., Fig. 1, item 180; page 10, lines 8-15.

Applicants disclose a system and method, as recited by claims 14 and 15, for allowing a playback message signal to be combined with a receive signal in a voice messaging system having speakerphone capability comprising automatic gain controlling the playback message signal, e.g., Fig. 1, item 130, and hybrid echo canceling the receive signal in a receive path of a voice messaging system having speakerphone capability, e.g., Fig. 1, item 10. Applicants method further comprises combining a playback message signal with the receive signal into a receive path of the voice messaging system before performing the automatically gain controlling and after performing the hybrid echo canceling the receive signal allowing the playback message signal to be heard by a near-end party at a comparable level as the receive signal during speakerphone operation, e.g., Fig. 1, item 180; page 10, lines 8-15.

Applicants disclose a system and method, as recited by claims 16 and 19, for playing back a recorded voice message comprising establishing a telephone call, initiating a speakerphone function of a near end voice messaging device in the telephone call, playing back a voice message recorded on the near end voice messaging system while the telephone call remains established and hybrid echo canceling a receive signal, e.g., Fig. 1, item 10, and automatic gain controlling the voice message, e.g., Fig. 1, item 130. The Applicants system and method further comprises injecting an electrical signal corresponding to the played back voice message into a receive path of the voice messaging device before performing the automatic gain controlling and after performing the hybrid echo canceling allowing the playback message signal to be heard by a near-end

party at a comparable level as the receive signal while individual users at either end of the telephone call can continuously hear the played voice message and concurrently converse with one another as desired during speakerphone operation, e.g., Fig. 1, item 180; page 10, lines 8-15.

Applicants disclose a receive path, as recited by claim 26, of a voice messaging system with speakerphone capability comprising, a receive signal from a telephone line, a speakerphone microphone, a speakerphone loudspeaker, a hybrid echo canceller, e.g., Fig. 1, item 10, an automatic gain control module, e.g., Fig. 1, item 130, and a message playback module to playback a message playback signal, e.g., Fig. 1, item 140. The Applicants' receive path further comprises a combiner to combine the message playback signal with the receive signal into the receive path before the automatic gain control and after an output of the hybrid echo canceller allowing the message playback signal to be heard by the near-end party at a comparable level as the receive signal over the speakerphone loudspeaker, e.g., Fig. 1, item 180; page 10, lines 8-15.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- (A) Whether claims 26-28 are indefinite under 35 U.S.C. 112, second paragraph.
- (B) Whether claims 1-21 and 23-29 are obvious under 35 U.S.C. §103(a) over U.S. Patent No. 5,646,990 to Li ("Li") in view of U.S. Patent No. 5,692,042 to Sacca ("Sacca").

(7) ARGUMENT

(A) Claims 26-28 are not indefinite under 35 U.S.C. 112, second paragraph.

The Examiner rejected claim language found in claim 26 under 35 U.S.C. 112, second paragraph for the first time in the Final Office Action dated April 5, 2006. In particular the Examiner alleged that the recited "microphone" is

unclear in how such a component can be in a “receive path” that is recited in the preamble.

A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) (process claims, discussed below); *Kropa v. Robie*, 187 F.2d at 152, 88 USPQ at 481 (claims directed to apparatus, products, chemical structure, etc., as discussed below). The body of claim 26 lacks any reference to the preamble, does not depend on the preamble for completeness and therefore is able to stand alone. The preamble should not be given patentable weight in reviewing claim 26.

Moreover, a microphone can be part of both a transmit path and a receive path dependent upon the perspective taken when looking at an apparatus. For example, from the perspective of a near end user a microphone may produce a signal that is transmitted to a far end user and can be considered a part of a transmit path. However, from the perspective of a far end user a microphone can be considered part of a receive path as producing the signal received by the far end user. Thus, a microphone can be part of both a receive path and a transmit path dependent upon who's perspective it is taken from, i.e., a near end user of a speakerphone or a far end user receiving a signal from a speakerphone.

Thus, claim 26 is clear as written and the rejection of 35 U.S.C. 112, second paragraph is improper.

(B) Claims 1-21 and 23-29 are not obvious under 35 U.S.C. § 103(a) over Li in view of Sacca.

All rejected claims 1-21 and 23-29 require a system and method to combine a message playback signal with a receive signal into a receive path before performing automatic gain control and after performing hybrid echo

cancellation allowing the message playback signal to be heard by a near-end party at a comparable level as the receive signal.

The Examiner acknowledged that Li fails to disclose injecting a message playback signal into a summer to allow a near-end user to hear both a receive signal and the playback signal (see Final Office Action dated April 5, 2006, page 3). However, the reason Li fails to disclose injecting a message playback signal into a summer to allow a near-end user to hear both a receive signal and the playback signal is that Li's invention is directed toward minimizing the effects of echoes and gains introduced by speakerphone components (see Li, col. 1, lines 7-10). Li's invention has nothing to do with allowing a user to hear anything other than speakerphone signals. The Examiner is reminded that an obviousness rejection requires a specific showing as to why one of ordinary skill in the art would have selected the components for combination in the manner claimed. "The examiner's conclusory statements ... do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and [cannot] be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to '[use] that which the inventor taught against its teacher.'" In re Lee, 61 USPQ2d at 1434 (quoting W.L. Gore v. Garlock, Inc., 202 USPQ 303, 312-13 (Fed. Cir. 1983)). Nothing the Examiner provides suggests modifying Li to incorporate any other signals within a speakerphone, much less a message playback signal, as recited by claims 1-21 and 23-29.

Moreover, since the proposed modification of Li would change the principle of operation of Li, the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP § 2143.01, page 2100-132 (Rev. 2, May 2004) (citing In re Ratti, 123 USPQ 349 (CCPA 1959)).

Moreover, it is well settled that each and every claim limitation must be considered. As specified in MPEP §2143.03, entitled "All Claim Limitations Must Be Taught or Suggested": "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the

prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). ‘All words in a claim must be considered in judging the patentability of that claim against the prior art.’ *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” MPEP §2143.03 at 2100-139 (Rev. 3, Aug. 2005). The Examiner acknowledged that Li fails to disclose injecting a message playback signal into a summer to allow a near-end user to hear both a receive signal and the playback signal. However, the Examiner has failed to consider the entire imitation and failed to provide a prior art reference that discloses or suggests a method and system to combine a message playback signal with a receive signal into a receive path before performing automatic gain control and after performing hybrid echo cancellation allowing the message playback signal to be heard by a near-end party at a comparable level as the receive signal, as recited by claims 1-21 and 23-29.

Moreover, the Examiner alleges that Li disclose an echo canceller and automatic gain controller. However, Li only disclose such components for “minimizing the effects of echoes and gains introduced by [the] speakerphone components.”. Li fails to disclose such components for use in normalizing of sound levels of a message playback signal with a receive signal, i.e., allowing the message playback signal to be heard by a near-end party at a comparable level as the receive signal. Hence, since the proposed modification or combination would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP § 2143.01, page 2100-132 (Rev. 2, May 2004) (citing *In re Ratti*, 123 USPQ 349 (CCPA 1959). Nothing within Li or Sacca suggests completely changing the purpose of Li’s components from minimizing effects of echoes and gains introduced by speakerphone components to normalizing of sound levels of a message playback signal with a receive signal, i.e., allowing the message playback signal to be heard by a near-end party at a comparable level as the receive signal, as recited by claims 1-21 and 23-29.

The Examiner acknowledged that Li fails to disclose injecting a message playback signal into a summer to allow a near-end user to hear both a

receive signal and the playback signal (see Final Office Action dated April 5, 2006, page 3). The Office Action relies on Sacca to allegedly make up for the deficiencies in Li to arrive at the claimed features.

The Examiner alleged that Sacca discloses injecting a playback signal into a summer before an amplifier (see Final Office Action dated April 5, 2006, page 10). The Examiner appears correct in that Sacca appears to disclose injecting a playback signal into a summer before an amplifier. However, Applicants claims recite combining a message playback signal with a receive signal into a receive path before performing automatic gain control. Thus, Applicants' claimed features allow for normalizing of sound levels of a message playback signal with a receive signal, i.e., allowing the message playback signal to be heard by a near-end party at a comparable level as the receive signal. The Examiner has failed to either address this limitation or provide any prior art that discloses or suggests this claimed feature.

The Examiner alleges that "it is inherent that the playback module has a volume control for controlling its output level" (see Final Office Action dated April 5, 2006, page 3). However, Inherency is not applicable in a rejection under §103. *In re Newell*, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989). The rejection of claims 1-21 and 23-29 is improperly relying on inherency and is therefore improper and must be withdrawn.

Moreover, The Examiner alleges that "it is inherent that the playback module has a volume control for controlling its output level" (see Office Action, page 3). However, Applicants claimed features rely on automatic gain control allowing a message playback signal to be heard by a near-end party at a comparable level as a receive signal. The Examiner's inherent volume control requires a user to adjust a volume control not disclosing or suggest use of an automatic gain control. Moreover, a "playback module [that] has a volume control for controlling its output level" lacks the ability to allow a message playback signal to be heard by a near-end party at a comparable level as the receive signal, as recited by claims 1-21 and 23-29.

Moreover, the Examiner's motivation for modifying Li with Sacca "to enable a near-end user to connect one or more sources to a speakerphone as suggested by Sacca" (see Final Office Action dated April 5, 2006, page 3) is nonsensical. The Examiner's motivation to modify Li provides the same functionality that Sacca has, i.e., why modify Li to enable a near-end user to connect one or more sources to a speakerphone when Sacca already has that capability.

Moreover, the Examiner alleges that the motivation for modifying Li with Sacca "was to enable a near-end user to connect one or more sources to a speakerphone as suggested by Sacca (See Office Action, page 3). However, the Examiner is proving a result of the modification of Li. The Examiner has still failed to provide a reason why one would modify Li's system for minimizing the effects of echoes and gains introduced by speakerphone components to input any signal besides a speakerphone signal, much less the message playback signal recited by Applicants' claimed features. "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In re Fritch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

Thus, the Examiner has failed to provide a single reference that discloses or suggests a method and system to combine a message playback signal with a receive signal into a receive path before performing automatic gain control and after performing hybrid echo cancellation allowing the message playback signal to be heard by a near-end party at a comparable level as the receive signal, as recited by claims 1-21 and 23-29.

It is respectfully submitted that not only does this rejection fail on its face, and thus is improper, but also in light of the above comments its clear that Li in view of Sacca does not render obvious any of claims 1-21 and 23-29. Thus, the rejection of claims 1-21 and 23-29 under 35 U.S.C. § 103(a) is improper and should be reversed.

CONCLUSION

For all the reasons set forth above, the rejections of claims 1-21 and 23-29 are improper and should be reversed. The Applicants therefore respectfully request that this Appeal be granted and that the rejections of the claims be reversed.

Respectfully submitted,



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APPENDIX

CLAIMS INVOLVED IN THE APPEAL

1. A receive path of a voice messaging system with speakerphone capability, comprising:

a receive signal from a telephone line;
a hybrid echo canceller;
an automatic gain control module;
a message playback module to playback a message playback signal relating to a user pre-recorded voice message; and

a combiner to combine said message playback signal with said receive signal into said receive path before said automatic gain control and after an output of said hybrid echo canceller allowing said message playback signal to be heard by said near-end party at a comparable level as said receive signal during speakerphone operation.

2. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

a switched loss echo suppression module in said receive path.

3. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

a record module adapted to record said receive signal from said telephone line during a conversation on said speakerphone.

4. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

a message gain module between said message playback signal and said summer.

5. The receive path of a voice messaging system with speakerphone capability according to claim 4, wherein said message gain module comprises:

an automatic gain control portion; and
a fixed gain portion.

6. The receive path of a voice messaging system with speakerphone capability according to claim 1, wherein said gain module comprises:

a automatic gain control portion; and
a fixed gain control portion.

7. The receive path of a voice messaging system with speakerphone capability according to claim 2, wherein:

said switched loss echo suppression module is located in said receive path at a point after said gain module.

8. The receive path of a voice messaging system with speakerphone capability according to claim 2, further comprising:

a digital to analog converter in said receive path at a point after said switched loss echo suppression module.

9. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

a receive voice activity detector in communication with said receive path, said receive voice activity detector indicating a receive condition of said speakerphone.

10. The receive path of a voice messaging system with speakerphone capability according to claim 1, wherein:

said voice messaging system is a telephone answering device.

11. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

a conversational record signal formed from a gained representation of said receive signal summed with a gained representation of a transmit signal to said telephone line.

12. The receive path of a voice messaging system with speakerphone capability according to claim 11, wherein:

said gained representation of said receive signal is formed using both automatic gain control and fixed gain.

13. The receive path of a voice messaging system with speakerphone capability according to claim 11, wherein:

said gained representation of said transmit signal is formed using both automatic gain control and fixed gain.

14. A method of allowing a playback message signal to be combined with a receive signal in a voice messaging system having speakerphone capability, comprising:

automatic gain controlling said playback message signal;

hybrid echo canceling said receive signal in a receive path of a voice messaging system having speakerphone capability; and

combining a playback message signal with said receive signal into a receive path of said voice messaging system before performing said automatically gain controlling and after performing said hybrid echo canceling said receive signal allowing said playback message signal to be heard by a near-end party at a comparable level as said receive signal during speakerphone operation.

15. Apparatus for allowing a playback message signal to be combined with a receive signal in a voice messaging system having speakerphone capability, comprising:

means for automatic gain controlling;

means for hybrid echo canceling said receive signal in a receive path of a voice messaging system having speakerphone capability; and

means for combining a playback message signal with said receive signal into a receive path of said voice messaging system before said means for automatic gain controlling and after said means for hybrid echo canceling said receive signal allowing said playback message signal to be heard by a near-end party at a comparable level as said receive signal during speakerphone operation.

16. A method of playing back a recorded voice message, comprising:

establishing a telephone call;

initiating a speakerphone function of a near end voice messaging device in said telephone call;

playing back a voice message recorded on said near end voice messaging system while said telephone call remains established; and

hybrid echo canceling a receive signal;

automatic gain controlling said voice message;

injecting an electrical signal corresponding to said played back voice message into a receive path of said voice messaging device before performing said automatic gain controlling and after performing said hybrid echo canceling allowing said playback message signal to be heard by a near-end party at a comparable level as said receive signal while individual users at either end of said telephone call can continuously hear said played voice message and concurrently converse with one another as desired during speakerphone operation.

17. The method of playing back a recorded voice message according to claim 14, wherein:

 said voice messaging system is a telephone answering device.

18. The method of playing back a recorded voice message according to claim 16, wherein:

 said electrical signal is injected digitally.

19. Apparatus for playing back a recorded voice message, comprising:

 means for hybrid echo canceling;

 means for automatic gain controlling;

 means for establishing a telephone call;

 means for initiating a speakerphone function of a near end voice messaging device in said telephone call;

 means for playing back a voice message recorded on said near end voice messaging system while said telephone call is established; and

 means for injecting an electrical signal corresponding to said played back voice message into a receive path of said voice messaging device before said means for automatic gain controlling and after said means for hybrid echo canceling on said receive signal allowing said playback message signal to be heard by a near-end party at a comparable level as said receive signal while ~~into~~ individual users at either end of said telephone call can continuously hear said played voice message and concurrently converse with one another as desired during speakerphone operation.

20. The apparatus for playing back a recorded voice message according to claim 17, wherein:

 said voice messaging system is a telephone answering device.

21. The apparatus for playing back a recorded voice message according to claim 19, wherein:

means for injecting said electrical signal injects said signal digitally.

22. (canceled)

23. The method of allowing a playback message signal to be combined with a receive signal in a voice messaging system having speakerphone capability, apparatus for playing back a recorded voice message according to claim 14, further comprising:

recording said receive signal during a conversation on said speakerphone while allowing continuous hearing of said playback message signal by a far end party over said telephone line while said far end party is simultaneously speaking, allowing full-duplex communications.

24. The apparatus for playing back a recorded voice message according to claim 15, further comprising:

means for recording said receive signal during a conversation on said speakerphone while allowing continuous hearing of said playback message signal by a far end party over said telephone line while said far end party is simultaneously speaking, allowing full-duplex communications.

25. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

a record module adapted to record said receive signal from said telephone line during a conversation on said speakerphone.

26. A receive path of a voice messaging system with speakerphone capability, comprising:

- a receive signal from a telephone line;
- a speakerphone microphone;
- a speakerphone loudspeaker;
- a hybrid echo canceller;
- an automatic gain control module;
- a message playback module to playback a message playback signal; and

a combiner to combine said message playback signal with said receive signal into said receive path before said automatic gain control and after an output of said hybrid echo canceller allowing said message playback signal to be heard by said near-end party at a comparable level as said receive signal over said speakerphone loudspeaker.

27. The receive path of a voice messaging system with speakerphone capability according to claim 26, further comprising:

- a switched loss echo suppression module in said receive path.

28. The receive path of a voice messaging system with speakerphone capability according to claim 26, further comprising:

- a record module adapted to record said receive signal from said telephone line during a conversation on said speakerphone.

29. The receive path of a voice messaging system with speakerphone capability according to claim 1, further comprising:

- a message gain module between said message playback signal and said summer.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None